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NEW YORK JOURNAL

AND ADVERTISER.

WEATHER.

For New York City:
Rain; colder.
For New York, New Jersey, Connecticut and Eastern Pennsylvania: Rain; cooler; high northeast winds; clearing at night in Pennsylvania.
The highest temperature yesterday was 82 degrees, at 2 p. m.
The lowest temperature yesterday was 68 degrees, at 3 a. m.

LIQUID AIR AND PHOSPHORUS EXPLODE AND BURN A CHEMIST.

Professor Fay Learns Painfully of Their Properties.
He Was Experimenting with Them at the Polytechnic Institute.
USING RED PHOSPHORUS.
Professor Tripler Intimates That Professor Fay Ought to Have Known Better.
AIR HAD TURNED TO OXYGEN.
The Consequence Was That the Phosphorus Was Instantly Oxidized and the Explosion Followed.



HOW THE EXPLOSION OCCURRED.
LIQUID AIR, the newest discovery of science, is the air that we breathe compressed into the form of water.
RED PHOSPHORUS is ordinary phosphorus made to burn in an insufficient supply of air, or produced by the long-continued action of sunlight on phosphorus sticks kept under water.
The effect of mixing liquid air and red phosphorus at the Polytechnic School yesterday was oxidation and a reaction of explosive gases, unless the flames and the explosion that occurred came of some extraneous cause that no one may divine.

Burnt by an Explosion of Liquid Air and Phosphorus.

Professor Fay, giving a demonstration at the Polytechnic Institute, Brooklyn, tried the effect of liquid air upon red phosphorus. The result was an explosion and the burning of Professor Fay's face and eyes.
vid H. Cochran, was there. The poststar, Robert L. Mason, also was present. Also. He said, with the decisive authority of the man who regards particularly the damage that is done, that the flames and the explosion were the result of some one's negligence.
The explosion and the sound in the street of a heavy globe falling from a cart on the cobble stones. The window panes were broken. The entire building shook. A hole was blown through the laboratory table by the flames. Fire engines came in response to an alarm sent by one of the frightened students, unnecessarily.
Professor Fay had been turning with a glass rod the liquid air into the red phosphorus on the laboratory table. He had put the red phosphorus at first into the glass, filling about a quarter of it. He had poured the liquid air over the phosphorus in equal quantity. Then he had spread the mixture on the table. No one may tell the phases in the accident that ensued.
There had not been in the school's history a lecture as interesting as the one that Professor Fay delivered before the students. It had kept the attention of all the students riveted upon him for an hour. The subject was captivating enough. It was liquid air, the newest miracle of science.
What Liquid Air Does.
Professor Fay said: "In our natural philosophies an axiom is that the air that we breathe may not be liquefied. Well, Charles E. Tripler has proved that even that was not impossible. He has compressed eight hundred cubic feet of air into a cubic foot of liquid. This had been placed in a large can. Over the top was a cushion of hair felt that kept out the heat without preventing the free escape of expanding gases.
Professor Fay explained the mechanical means by which Tripler obtained liquid air. One ounce of it in an English laboratory had cost \$3,000. His work had resulted in the practical, easy application of a newly discovered scientific truth.
There was no difficulty or danger in handling it, provided reasonable precaution was used, and the gases were not confined. It could be dipped up with a tin cup and poured into any sort of dish, like water. If the dipper were dropped it would break like glass. That was all.
The liquid air had come to the school from Tripler's laboratory in a large tin can, wrapped with felt. This had been placed in a larger can. Over the top was a cushion of hair felt that kept out the heat without preventing the free escape of expanding gases.
Professor Fay in his lecture pointed to the can and said what the use of its contents might be. Liquid air might be used as cold air in houses in summer, or pure air in sick rooms, as explosive air in bombs, or as motive air in balloons. The lecture said things that were practical and they sounded like fairy tales.
Wonderful Experiments.
His experiments were not less amazing. He dipped his finger into the liquid air for an instant and showed that it was dry when he withdrew it. He threw a spoonful of the liquid air on his coat sleeve and

the cloth was not moistened, but so chilled that it was white with frost. Better the liquid air was reduced to a fine, dry dust; an oyster became as hard as the shell from which it was extracted. Professor Fay poured half a pint of mercury in a paper mould and poured over the surface liquefied air. The quicksilver was frozen into a rigid bar so cold that it had to be touched with a finger. He fastened a weight of forty pounds to the bar and it thawed sufficiently to let the weight fall in fifteen minutes only.
The professor poured liquid air over alcohol, and soon the latter was frozen into a snowy mass of crystals. He stirred this mass and reduced it to the condition of liquid sugar. He lifted that out with a stick, from which it hung down in an icicle seven or eight inches long. He poured more liquid air over it and it was rigid.
There was liquid air simmering in a dial, but the outer surface of it was heavily coated with frost. The more the liquid air boiled the colder it was. Professor Fay intended to display as the last experiment of his lecture a ring of drops from a test tube, which would have been simply "air" seeping out.
At his home last evening, where Dr. Henry L. Cochran, the son of the president of the Polytechnic School, was in constant attendance upon him, he said, conversationally, that no explanation of the accident could be made. Scientifically, all expressions should be reserved. One expert, however, was not so cautious. In the one that he made only fifty grammes of red phosphorus were used. But perhaps even red phosphorus under certain conditions, make a fire and an explosion. His eyes were all inflamed and he was able to see a dim light.
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SPIDERS INVADE A MAINE HOME.

Millions of Pests in Mrs. Pierce's Residence at Southport Drive Out Inhabitants.
Leviston, Me., Oct. 21.—Mrs. Julia Pierce and daughter Emma, of Southport, Me., have been driven out of their house by an unaccountable visitation of spiders, which to the number of millions swarm in every crack and crevice between the partitions, in the floors, fences, outbuildings, and in the house.
They called in a physician about two weeks ago to ascertain what it was that was causing them so much discomfort, they being bitten or stung by something they could not tell what. The bites were very painful, but yielded readily to treatment. Every effort that could be thought of to get rid of the pests has been made, and several hundred dollars' worth of furniture has been destroyed, but in vain. Finally they appealed to the Board of Health, which after examination ordered the house vacated. Health officers are now considering the advisability of destroying the buildings, in which case they will probably be paid for by the town or State.
The spiders are said to have been brought in some clothing from the South, and it is thought they may be a species of tarantula. A live specimen has been sent to Professor Robinson, of Bowdoin College.

FIERCE MAGATOS FIGHT THE BOERS.

War Breaks Out in the Transvaal and Looks Serious.
Chief Opefu, with 20,000 Men and Four Cannon, Makes War.
HE ATTACKS THE LAAGER.
General Joubert's Ultimatum Ignored and He Sends for Reinforcements.
3,000 BURGHERS CALLED OUT.
Tribesmen Massacre Missionaries—They Are Among the Fiercest of the Wild African Aborigines.

Pretoria, Oct. 21.—Serious trouble is brewing with the Magato tribe, in the Zoutpans Berg District, south of the Limpopo River.
The natives massacred a Lutheran missionary and his family at the town of Zoutpans Berg recently, and the Transvaal Government sent an expedition to punish them.
Chief Opefu, with 20,000 followers fully armed, and four cannon, supplied by white traders, has attacked the laager. Heavy fighting is proceeding.
The ultimatum of the commanding officer of the Transvaal troops, General P. J. Joubert, demanding an unconditional surrender, has been ignored by the tribesmen; and he has summoned 3,000 burghers to reinforce the 5,000 now in the field.
The campaign promises to be prolonged.

The scene of the fighting between the Transvaal burghers under General Joubert and the tribesmen who follow Chief Opefu is the extreme northern section of the Transvaal territory, west of Gasa Country (Umlingoland) and southeast of the country of the Matebele. It is in the very heart of a district inhabited by some of the bravest and most intractable of South African tribesmen. Chief Opefu has long been a thorn in the side of the Transvaal Government.
General Joubert, who is conducting the operations against the tribesmen, is Vice-President of the South African Republic, as well as Commander-in-Chief of the Transvaal army. He was elected Vice-President on May 13, 1896. He was one of the founders of the South African Republic, constituting with Paul Kruger, now President, and Marthaus Wessels Pretorius, the triumvirate who proclaimed it on December 30, 1880.

DUELLING COUNT SENT TO PRISON.

Must Serve One Month Longer Than a Year for "Killing His Man."
London, Oct. 22.—The Rome correspondent of the Times says: "Count Ferruccio Macola, proprietor of Gazzetta di Venezia, has been sentenced to thirteen months' imprisonment for killing Signor Felice Carlo Cavallotti, the poet, dramatist, publicist and Radical member of the Chamber of Deputies, in a duel last March.
"Count Macola's seconds, Signor Guido Finisato and Signor Carlo Donati, and the seconds of Cavallotti, Signor Dizoni, the publicist, and Signor Tassi, of the Chamber of Deputies, have all been acquitted. Macola's plea of extenuating circumstances, on the ground that he was the victim of insult and gross provocation, was not allowed."
The Time to Act.
"We bore her acts for many, many years with good humor; then good humor changed to impatience, and finally impatience deepened into irritation or something stronger. We feel that in the present question it is not an unhealthy spot on the Nile which is at stake, or even a fertile province, but the whole question of British dominion in Egypt and the vast and larger question of the right of the British Empire to exist. And thus upon us falls a great duty. We must yield Government and Admiralty our full and sincere confidence, criticizing no longer, but obeying."
"We shall accept what the future has in store for us, not indeed with a light heart, but with the grave and earnest determination of men who have weighed facts and know their minds."
"We are told by the Admiralty that our fleet is ready, and we may feel confident that our naval leaders are watching the situation with the deepest attention. We may trust them not to be surprised. Whatever calls or claims our country makes upon us we shall gladly meet."
The British Admiralty issued two orders to-day, showing that France's display of naval activity will not be allowed to go unheeded.
Orders to Naval Men.
The first order directs the commanders of naval stations and dockyards to undertake no repairs on war ships that will require more than forty-eight hours to complete. This means that every serviceable British ship must be cleared of workmen by

FRANCE DEFILES ENGLAND. WAR SEEMS AT HAND—BOTH PREPARE FOR THE CONFLICT.

Refusal to Recall Marchand from Fashoda Will Lead to an Attack on the Frenchman by the British.
England's Powerful Fleet Ready to Move—Both Countries Stirred by the Warlike Utterances of the Newspapers.

Monday morning and no tinkering allowed to detain them.
The second order refers to the new great cruiser Terrible, which has needed a lot of patching and is now in the hands of workmen. The present repairs are scheduled to be finished November 17, but the constructors intended to make further changes. The Admiralty orders that the Terrible go into commission November 17 without waiting for further repairs.
To Oust Marchand.
It is stated that if diplomacy fails England will remove Marchand from Fashoda by force. More artillery has already been ordered up the Nile to Omdurman.
A strong force will be sent to Fashoda, and Marchand will again be warned to get out. If he still declines, fighting will probably ensue. It is not likely to be more than a few shots, as his force is decidedly weak, although he might delay it his duty to make resistance.
In the end he would be sure to be taken to Cairo by the British.
This would constitute an overt act, for which France would undoubtedly declare war.
Somebody Must Back Down.
Somebody must back down, and from every official source the assertion is made that England will not recede from the declaration that Marchand must be withdrawn by the French Government before any further diplomatic negotiations can be considered.
Despite the assertion of the Paris press that negotiations are now proceeding, authoritative declarations are made in London that Lord Salisbury has had no official communication with the French Government since his final instructions to Sir Edward Monson, British Ambassador in Paris, to demand the withdrawal of Marchand from Fashoda.

Special Cable to the Journal.
(Copyright, 1898, by W. R. Hearst.)
London, Oct. 21.—The relations between England and France have grown exceedingly serious to-day. The Journal correspondent was shown to-night a letter written by one of the leading diplomats in London to a close friend, saying: "I am sending you this for your own guidance. I have just come from a conference with Lord Salisbury. Nothing but a miracle can save us from war."
Even the most radical public leaders have not thought affairs were so serious as this note indicates.
France is Defiant.
The Daily Mail says it has the highest authority for stating that the French Government notified the English Government three days ago that it would not abandon Fashoda.
The French position is now open resistance to England's demands.
Count Muraviev's visit to Paris is generally believed to assure France of Russia's support. The situation has assumed a critical stage to-night. London newspapers have taken a more alarming tone. Reports from all parts of France of naval and military activity fill columns of the papers.
Britain's Fleet Ready.
On the other hand reports from English naval stations show that the whole enormous fleet is ready for any emergency. General Kitchener left Cairo to-day for London. He will arrive Thursday. A deadlock is on between the two nations. England will undoubtedly remove Marchand by force, thus affording a casus belli.
The Daily Mail's leading editorial for to-morrow is the strongest warlike utterance of many years, and voices the sentiment of the great mass of the British population.
"The nation may be approaching the hour of trial. It is difficult to suppose that France can be so foolish or so wicked as to provoke war when she is so palpably in the wrong, but appearances are most ominous."
"Lord Salisbury's determination is absolute. He will do his best to assist France to extricate herself from the perilous situation into which the aggressiveness of her colonial party has thrust her. He cannot do more. He cannot surrender. The die is cast. The sympathy and support of all Englishmen will be with him. Behind his determination is the will of a great people."
"For years France has engaged in what can only be described as a belated war upon British interests and trade in every quarter of the globe."
The Time to Act.
"We bore her acts for many, many years with good humor; then good humor changed to impatience, and finally impatience deepened into irritation or something stronger. We feel that in the present question it is not an unhealthy spot on the Nile which is at stake, or even a fertile province, but the whole question of British dominion in Egypt and the vast and larger question of the right of the British Empire to exist. And thus upon us falls a great duty. We must yield Government and Admiralty our full and sincere confidence, criticizing no longer, but obeying."
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Paris, Oct. 21.—The leading newspapers are absorbed with the Fashoda affair. They contain very little news, with alarming headlines, which have caused a bitter feeling against England.
While some conservative journals attempt to deal with the subject in an argumentative manner, hoping a conflict can be avoided, all declare against compromising French honor. The boulevard sinners are full of defiant articles.
Minister of Marine Lockroy has ordered a series of firing exercises by the Toulon fleet, and to-day the old gunboat Tromblon was used as a target. She was surrounded by a protective netting, but was sunk by projectiles in half an hour.
By Associated Press.
Paris, Oct. 21.—Major Marchand's report, telegraphed from Cairo, was received during the course of the night. It does not mention the arrival at Fashoda of General Kitchener, and only gives an account of the incidents of the expedition, with an elaborate description of the route followed, the points occupied, the manner of occupation, the raising of the flag, the force left at each point and the treaties of submission concluded with the tribes, in addition to referring to an encounter with the Derivishes.
The reason for the omission of any mention of the arrival of General Kitchener at Fashoda is said to be the fact that the report of Major Marchand was not ready when Captain Baratier, who took the message to Cairo, left Fashoda. When the Captain started from that place he did not think he would go beyond Khartoum. Major Marchand, however, deemed it advisable to send the finished portion of the report, intending to dispatch the remainder of it as soon as Captain Baratier returned. But the captain, on arriving at Omdurman, found there instructions telling him to go to Cairo, from which place he will come to France.

French Troops Preparing.
Paris, Oct. 21.—The Temps this evening publishes a dispatch from Nantes saying that the Fourth Battalion of the Infantry regiments comprising the Twenty-first Division, with headquarters at Nantes, have completed their war equipment. Each man, it is added, has received 120 rounds of ammunition, and his camp outfit, and the officers of all the four regiments of that division have been supplied with revolver cartridges. The division is not in readiness to march when ordered, and it is

believed these troops are intended for coast defense. The defense of St. Nazaire is also being organized.
PEARY'S STEAMER TO REMAIN NORTH.
So the Leopard's Captain Predicts—He Reports Exceptional Storms Off St. John's.
St. John's, N. F., Oct. 21.—The Labrador mail steamer Leopard, which arrived here to-day, reports exceptional storms along the coast. Her captain thinks there is no likelihood of the arrival this Autumn of Lieutenant Peary's steamer Windward. Captain John Bartlett, now supposed to be in the Far North, after landing Lieutenant Peary and his colleagues.
The steamer Neptunus, which among to-day's arrivals, reports that the hull of the steamer "Ganges," which was recently wrecked off Point Barrow, is under water, and that there is no prospect of saving anything but the deck gear.
DISGREE IN SUIT OF HOUSEKEEPER.
Sensational Damage Suit for \$25,000 Against Miss Grace Arent in Virginia Must Now Go Over.
Richmond, Va., Oct. 21.—The jury failed to agree last night in the sensational damage suit for \$25,000 against Miss Grace Arent, a niece of the late Millionaire Lewis Ginter.
The plaintiff in this case is Mrs. Laura B. Dowden, a former housekeeper for Major Ginter. She alleges that Miss Arent accuses her of being responsible for the loss of valuable jewelry which was missed from Mr. Ginter's Franklin street house.
The charge resulted in the searching of Mrs. Dowden's trunk. The housekeeper then brought suit against Miss Arent. The testimony was concluded to-day, and the case was given to a jury, but on account of the disagreement it must go over.
Miss Arent is one of the leading beneficiaries of Major Ginter's will. One of the bequests is the magnificent house in which Mrs. Dowden was the housekeeper.
AWFUL DEATH OF TWO CHILDREN.
Fell into a Vat Used in the Making of a Fertilizer—Father Crazed by the Sight.
Middleton, N. Y., Oct. 21.—When Mrs. William Meyer, whose husband operates fertilizer works at Milo, two miles from this city, laid down her baby yesterday afternoon, and went to the factory in quest of her three-year-old daughter Mabel and six-year-old daughter Ida, she found them dead in a vat used for manufacture of the fertilizer.
She pulled the bodies out and left them at the side of the vat until her husband returned from a twenty-mile drive.
Neighbors notified Coroner Harding, of Port Jervis, who reached the scene late in the evening. Almost at the same moment the father returned and seeing the bodies tried to shoot himself with an army pistol, but his wife disarmed him.
Soon afterward he was operating a long-bladed jackknife to cut his throat, when the men watching him interfered.
He is now constantly watched.

SHERIFF CLOSES AN INSURANCE SOCIETY
Sixteen Judgments Too Much for the Order of American Israelites.
The Order of American Israelites, an insurance organization run on the assessment system, has gone under. All of its property passed into the hands of the Sheriff yesterday.
During the last week sixteen judgments were obtained against the society. The principal creditors are Mrs. Rose Berger and Miss Rose Gluck. The former seeks to recover \$13,400.34 and the latter \$249.25. The Order of American Israelites has a membership of 1,000.
Bill Posters Are Still Out.
The bill posters, who went on strike early in the week, asserted yesterday that the reports that the strike was settled which were in circulation at the different political headquarters on Wednesday evening, were without foundation. A bill arose in the negotiations for a settlement and the men are still out.
Mass Meeting for Bacon.
The Citizens' State party will hold a mass meeting in Cooper Union next Tuesday night. Theodore Tilton, the party's candidate for governor, will speak.